

WHAT IS CLAIMED IS:

1. A flexible press cover for a shoe press roll used for at least one of dewatering and calendaring a moving fibrous web, said flexible press cover comprising:

a plastic layer;

a conventional reinforcement embedded in said plastic layer, said conventional

5 reinforcement used as a strengthening element;

one of a woven fabric and a laid fabric including a plurality of axially parallel longitudinal filaments and a plurality of circumferential filaments;

a first end region and a second end region associated with said flexible press cover; and

an additional strengthening element in a form of an additional reinforcement in at least

10 one of said first end region and said second end region, said additional strengthening element making said flexible press cover suitable to be fixed to a rotatable supporting element of the shoe press roll.

2. The flexible press cover of claim 1, wherein said rotatable supporting element is a spreader ring.

3. The flexible press cover of claim 1, further including an outer circumferential surface on said rotatable supporting element, said flexible press cover suitable to be fixed to said outer circumferential surface.

4. The flexible press cover of claim 3, further including an arrangement for fixing said flexible press cover to said rotatable supporting element, said arrangement being free of fixing elements associated with said outer circumferential surface.

5. The flexible press cover of claim 1, further including an inner circumferential surface of said flexible press cover in at least one of said first end region and said second end region having said additional strengthening elements, said inner circumferential surface being cylindrical.

5

6. The flexible press cover of claim 1, further including an inner circumferential surface of said flexible press cover in at least one of said first end region and said second end region having said additional strengthening elements, said inner circumferential surface being conical with an internal diameter that one of increases and decreases in an outward direction.

5

7. The flexible press cover of claim 6, wherein said rotatable supporting element can be spread to enlarge a diameter of said rotatable supporting element.

8. The flexible press cover of claim 1, wherein said additional reinforcement has said plurality of circumferential filaments which are wound onto said conventional reinforcement from an outside.

9. The flexible press cover of claim 1, wherein said additional reinforcement has a plurality of circumferential filaments which are wound onto said conventional reinforcement from an inside.

10. The flexible press cover of claim 1, wherein said additional strengthening elements include a thickened bead with an internal diameter which is smaller than an internal diameter of a remaining of said flexible press cover.

11. The flexible press cover of claim 10, wherein said additional strengthening is in only one of said at least one of said first end region and said second end region.

12. The flexible press cover of claim 10, further including an other additional reinforcement being provided in said thickened bead.

13. The flexible press cover of claim 12, wherein said other additional reinforcement is at least one of said plurality of axially parallel longitudinal filaments, said plurality of wound circumferential filaments and said woven fabric.

14. The flexible press cover of claim 1, wherein said additional strengthening elements are formed of additional circumferential filaments which form a continuation of said conventional reinforcement, said additional circumferential filaments can be formed by at least one of an increased winding density and an increased filament thickness.

5

15. The flexible press cover of claim 1, wherein said in that the additional reinforcement has at least one band.

16. The flexible press cover of claim 1, wherein said at least one band is a woven fabric band.

17. The flexible press cover of claim 1, wherein in said at least one of said first end region and said second end region having said additional strengthening elements there is a greater thickness than an adjacent press cover region.

18. The flexible press cover of claim 1, wherein said additional strengthening elements includes a strengthening ring prefabricated from one of a plastic and a metal.

19. A flexible press cover for a shoe press roll used for at least one of dewatering and calendaring a moving fibrous web, said flexible press cover comprising:

a plastic layer;

a conventional reinforcement embedded in said plastic layer, said conventional

5 reinforcement used as a strengthening element;

a first end region and a second end region associated with said flexible press cover; and

an additional strengthening element in a form of a strengthening ring in at least one of said first end region and said second end region, said strengthening ring being prefabricated from one of a plastic and a metal, said additional strengthening element making said flexible press
10 cover suitable to be fixed to a rotatable supporting element of the shoe press roll, at least part of said strengthening ring is cast into said flexible press cover, as viewed in cross section through said strengthening ring.

20. The flexible press cover of claim 19, wherein said rotatable supporting element is a spreader ring.

21. The flexible press cover of claim 19, further including an outer circumferential surface on said rotatable supporting element, said flexible press cover suitable to be fixed to said outer circumferential surface.

22. The flexible press cover of claim 19, wherein said strengthening ring is anchored in said flexible press cover with an aid of a plurality of reinforcing filaments.

23. The flexible press cover of claim 19, wherein said strengthening ring is cast in following a casting of said plastic layer.

24. The flexible press cover of claim 19, wherein said strengthening ring is cast in at the same time as a cast of said plastic layer.

25. The flexible press cover of claim 19, wherein said strengthening ring has a flange for fixing said flexible press cover to said rotatable supporting element belonging to the shoe press roll.

26. The flexible press cover of claim 25, wherein said rotatable supporting element is a cover carrying disk.

27. A shoe press roll, comprising:

a flexible press cover including a plastic layer, a conventional reinforcement embedded in said plastic layer, said conventional reinforcement used as a strengthening element, one of a woven fabric and a laid fabric, said one of a woven fabric and a laid fabric includes a plurality of axially parallel longitudinal filaments and a plurality of circumferential filaments; a first end region and a second end region associated with said flexible press cover; an additional strengthening element in a form of an additional reinforcement in at least one of said first end region and said second end region, a cover inner surface of said flexible press cover in at least one of said first end region and said second end region having said additional strengthening elements, and an outer circumferential surface;

a stationary supporting element;

a first roll end and a second roll end associated with said shoe press roll; and

a first rotatable cover carrying disk at said first roll end, a second rotatable cover carrying disk at said second roll end, said first rotatable cover carrying disk and said second rotatable cover carrying disk mounted on said stationary supporting element, at least one of said first rotatable cover carrying disk and said second rotatable cover carrying disk including a clamping ring which can be displaced axially on an outer circumferential surface of said at least one of said first rotatable cover carrying disk and said second rotatable cover carrying disk, said clamping ring having a conical outer surface which engages in a conical inner surface of a ring that can be spread, said ring that can be spread resting in said cover inner surface, and an absence of fixing elements associated with said outer circumferential surface of said flexible press cover.

28. The shoe press roll of claim 27, wherein said clamping ring can be displaced axially by way of at least one screw.

29. The shoe press roll of claim 27, wherein said clamping ring can be displaced axially by way of a hydraulic pressure chamber.

30. The shoe press roll of claim 27, wherein said ring that can be spread has a collar for an axial fixing of said flexible press cover.

31. A shoe press roll, comprising:

a flexible press cover including a plastic layer, a conventional reinforcement embedded in said plastic layer, said conventional reinforcement used as a strengthening element, one of a woven fabric and a laid fabric, said one of a woven fabric and a laid fabric includes a plurality of axially parallel longitudinal filaments and a plurality of circumferential filaments; a first end region and a second end region associated with said flexible press cover; an additional strengthening element in a form of an additional reinforcement in at least one of said first end region and said second end region, a cover inner surface of said flexible press cover in at least one of said first end region and said second end region having said additional strengthening elements and an outer circumferential surface;

a stationary supporting element;

a first roll end and a second roll end associated with said shoe press roll;

a first rotatable cover carrying disk at said first roll end, a second rotatable cover carrying disk at said second roll end, said first rotatable cover carrying disk and said second rotatable cover carrying disk mounted on said stationary supporting element;

a mounting ring being provided which, outside said flexible press roll, can be inserted into at least one of said first end region and said second end region having said additional strengthening elements, and, subsequent to said mounting ring being inserted, can be fixed to at least one of said first rotatable cover carrying disk and said second rotatable cover carrying disk together with said flexible press cover.

32. The shoe press roll of claim 31, wherein said mounting ring has a conical outer circumferential surface matching a conical inner circumferential surface of said flexible press cover in at least one of said first end region and said second end region which has said additional strengthening elements.

5

33. The shoe press roll of claim 31, wherein said mounting ring has a substantially cylindrical outer circumferential surface.

34. The shoe press roll of claim 31, wherein said mounting ring can be inserted into an end region of said flexible press cover which is tapered conically outward.

35. The shoe press roll of claim 31, wherein said mounting ring has a collar for an axial fixing of said flexible press cover.